

# MR2S 13.56MHz RFID Reader

1-wire Mifare UID Reader

## ■ INTRODUCTION

MR2S is Mifare UID Reader with 1-Wire and RS232 interface, designed to integrate with vehicle trackers and the other controllers. With 10~48VDC power input, it's convenient to install the reader in different vehicles. It aims to offer more flexibility to build solutions at affordable cost, can be used alternatively for iButton and get your solution working with low cost Mifare cards.



## ■ FEATURES

- Frequency: 13.56MHz
- Read UID of ISO 14443A Mifare, DESFire card
- Support data Output 1-Wire, RS232
- Support the other 1-Wire input interface
- Available to install on metal surface
- Available to install on different vehicles
- Weather resistant

## ■ SPECIFICATIONS

### OPERATING

Transmit Frequency	13.56MHz Standard
Transponder	ISO14443A Mifare, DESFire, Ultralight card
Reading distance	2~5 cm Typ
Interface	1-Wire & RS-232

### ELECTRICAL

Power Input	10 to 48 VDC
Current Consumption	About 30 mA @12VDC

### MECHANICAL

Dimensions	Length : 77.5 mm / Width : 42.5 mm / Height : 15 mm
Weight	85 gm (With Cable)
Cable Length	90 cm +/- 2cm

### ENVIRONMENTAL

Temperature	Operating : -20 °C to 70 °C Storage : -30 °C to 80 °C
Humidity	Operating : 10 % to 90 % noncondensing Storage : Up to 90 % noncondensing

## **LIMITED WARRANTY**

Giga-Tms warrants that the products sold pursuant to this Agreement will perform in accordance with Giga-Tms's published specifications. This warranty shall be provided only for a period of **one year** from the date of the shipment of the product from Giga-Tms (the "Warranty Period"). This warranty shall apply only to the "Buyer" (the original purchaser, unless that entity resells the product as authorized by Giga-Tms, in which event this warranty shall apply only to the first re-purchaser).

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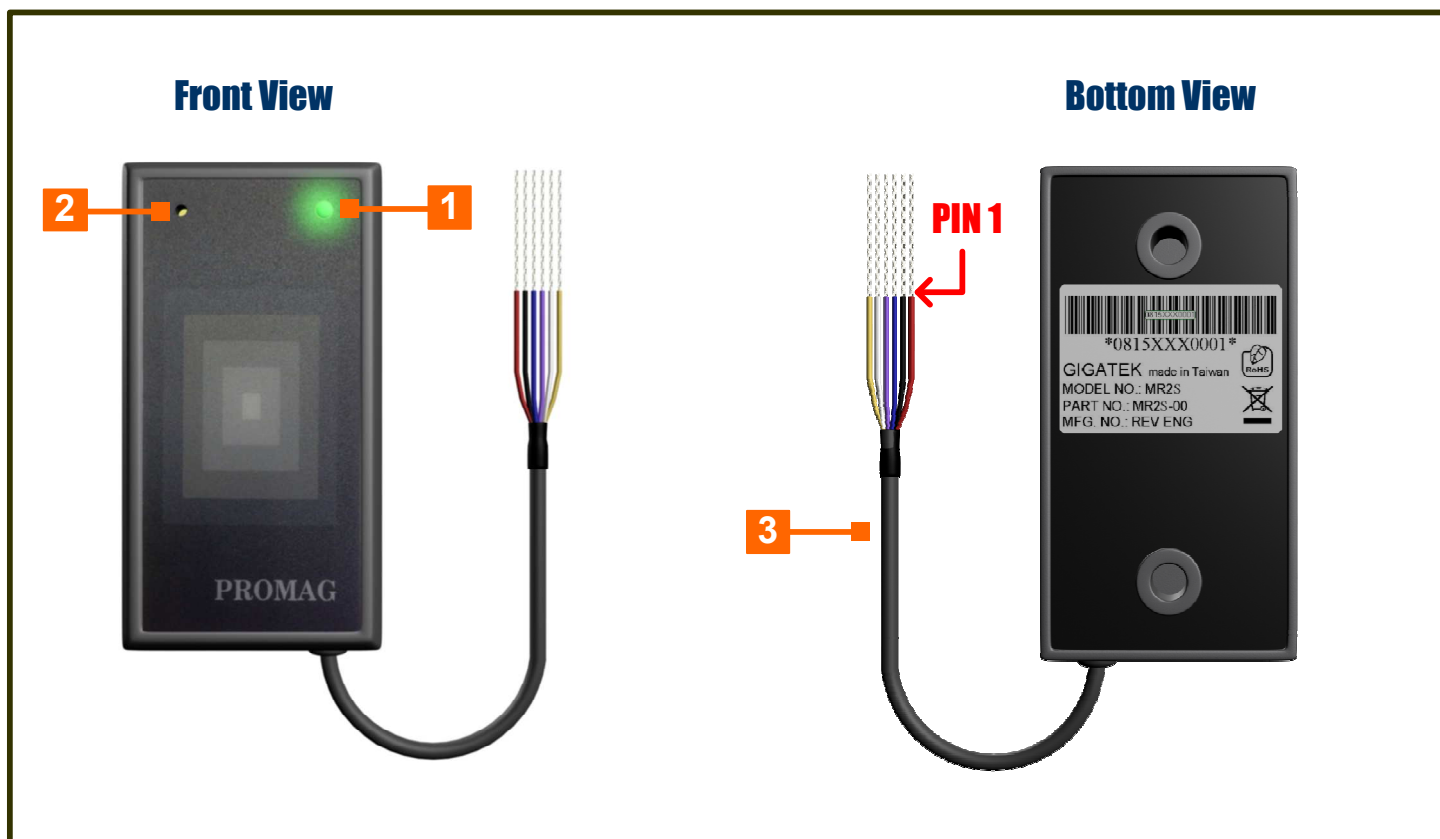
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## ■ TERMINAL / INDICATOR DESCRIPTIONS



### 1 LED Indicator

Green	Red	Description
On	Off	Standby
Blink	Off	Read OK
Off	Blink	Read Error
On	On	ISP Mode

### 2 Sound Indicator

Buzzer	Description
Bi-	Read OK
Bi-Bi-Bi	Read Error

### 3 6 Pin Terminal

Pin	Color	Signal	Description
1	Red	VCC	Power Input: 10~48 Volts
2	Black	GND	Power Ground
3	Blue	1-WIRE	DATA In/Out
4	Purple	1-WIRE	To Next Device
5	White	TX	RS232 TX (transmit)
6	Yellow	RX	RS232 RX (receive)

## ■ OUTPUT FORMAT

### 1-Wire Structure (Serial ASCII)

Baud Rate : 19200,N,8,1

CRC(2 HEX)	UNIQUE SERIALDATA( 12 HEX )	Family Code(2 HEX)
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All 1-Wire devices, including iButton devices, contain an 8-byte unique registration number.

The computation begins with the MSB of the 64-bit,

This 1-Wire Data consists of an 8-bit CRC, a unique 48-bit serial number and an 8-bit family code.

### RS232 Data Structure (Serial ASCII)

Baud Rate : 19200,N,8,1

STX(2 HEX)	DATA( 8 HEX )	CR(2 HEX)	LF(2 HEX)	ETX(2 HEX)
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The start character is factory defined as an 'STX' (02 HEX). This is followed by 8 Hex characters of data .

The CR/LF characters serve to bring the received screen text back to the left hand side and on the line below after the data bytes have been sent.

The 'ETX' (03 HEX) character denotes the end of the current transmission.

#### [Ex.]

#### Get Device Name

Host to MR2S

STX	"D"	CR
-----	-----	----

Host form MR2S

STX	"A"	","	"MR2S"	CR
-----	-----	-----	--------	----

#### Get Device Version

Host to MR2S

STX	"V"	CR
-----	-----	----

Host form MR2S

STX	"A"	","	"ROM-T1679"	","	"V1.00R6"	CR
-----	-----	-----	-------------	-----	-----------	----

## INTERFACE OPTION

The default interface for MR2S/MF7S is 1-Wire. For RS232 interface, please follow its pin assignment as below and use software to set up interface.

1. Connect the MR2S/MF7S unit with your computer.

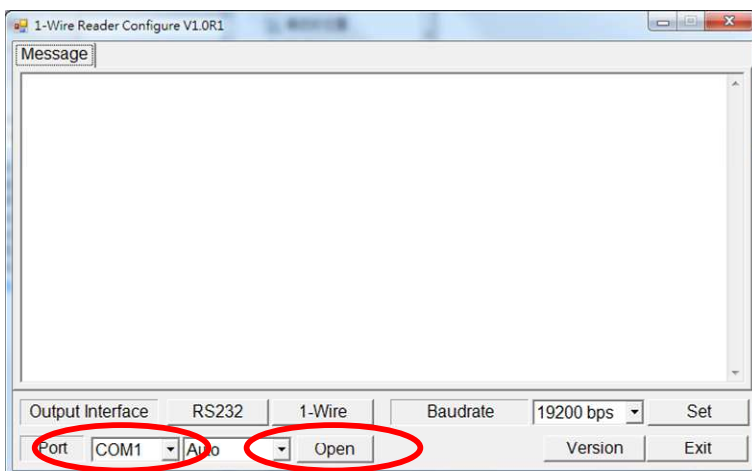


←→  
**RS232**



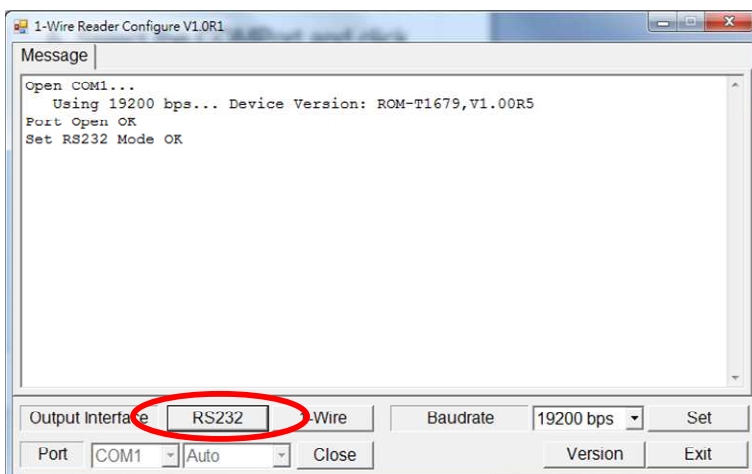
RED	BLACK	WHITE	YELLOW
VDD	GND	TX	RX

2. Download **1-Wire Reader Configure** software from below link for installation:  
<http://ftp.gigatms.com.tw/disks/disk5478>



A. Select the COMPort and click the “open” to execute software.

B. Click the “RS232 Output” and “Exit”.





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# MF7S 13.56MHz RFID Reader

## 1-wire Mifare UID Reader

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### ■ FEATURES

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Reading distance	2~5 cm Typ
Interface	1-Wire / RS-232

#### ELECTRICAL

Power Input	10 to 48 VDC
Current Consumption	About 30 mA @12VDC

#### MECHANICAL

Dimensions	Length : 82.6 mm / Width : 47 mm / Height : 17 mm
Weight	110 gm (With Cable)
Cable Length	90 cm +/- 2cm

#### ENVIRONMENTAL

Temperature	Operating : -20 °C to 70 °C Storage : -30 °C to 80 °C
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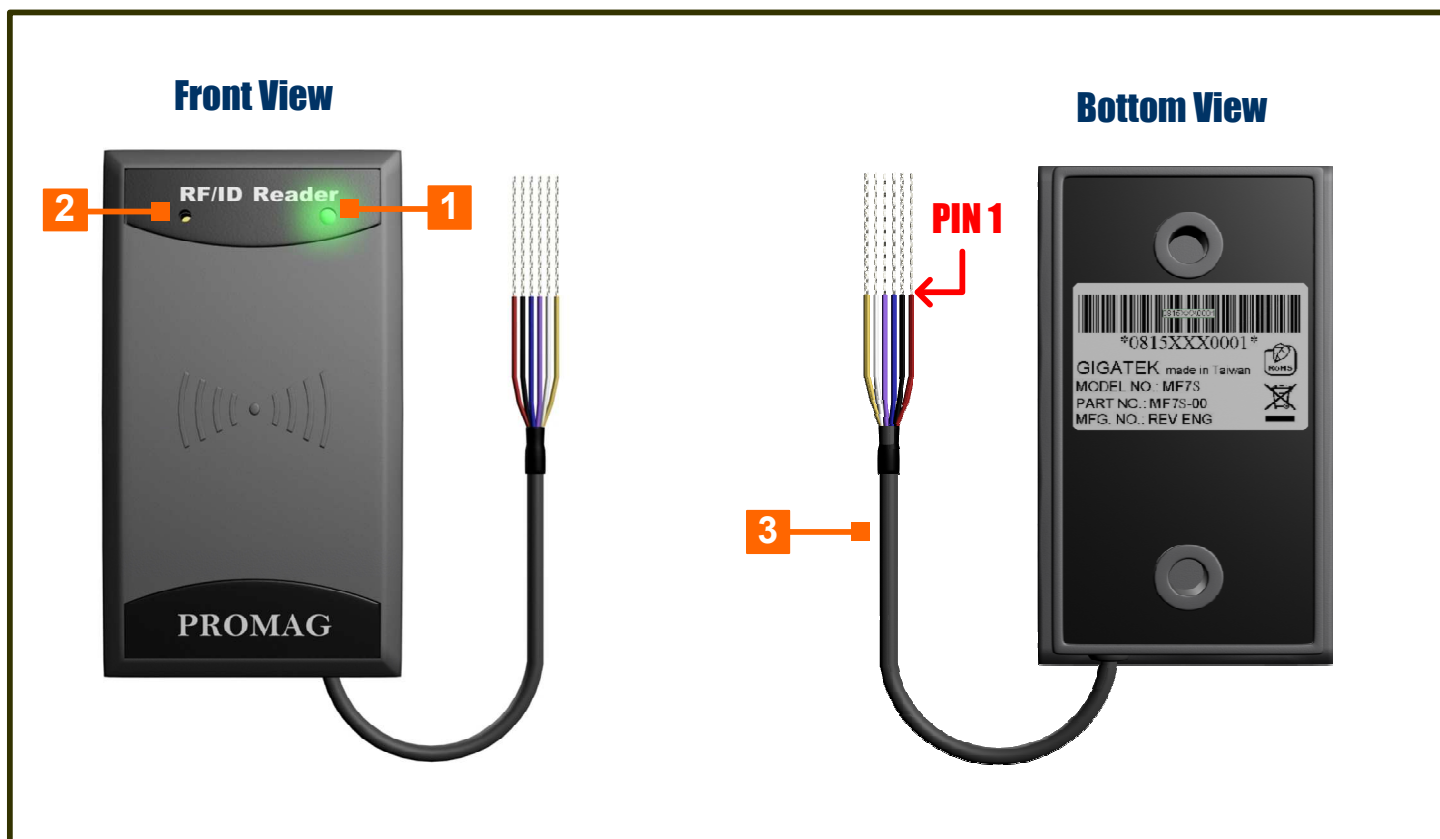
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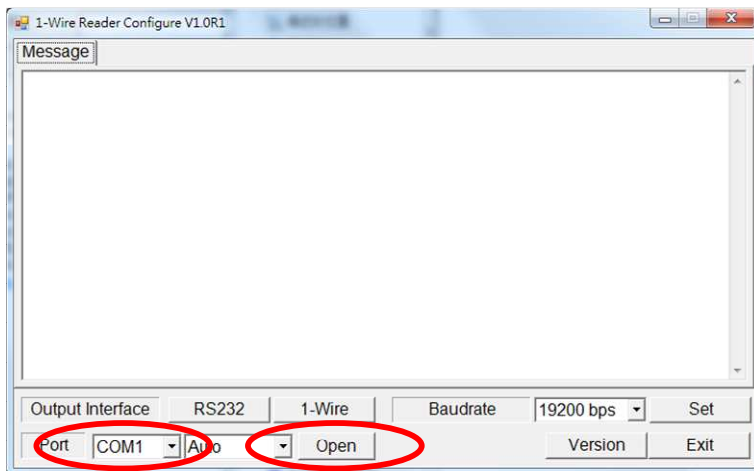


←→  
**RS232**



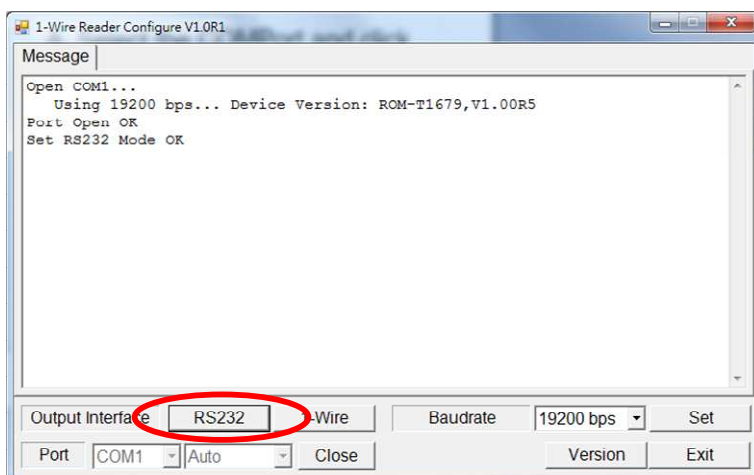
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This information only applies to customers in the European Union.

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## **Federal Communication Commission Interference Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- . Reorient or relocate the receiving antenna.
- . Increase the separation between the equipment and receiver.
- . Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- . Consult the dealer or an experienced radio/TV technician for help.

***FCC Caution:*** To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.